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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,484	12/20/2001	Norio Maeda	32254M009	4063

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08/19/2003

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EXAMINER

WILSON, PAMELA ANNE

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 08/19/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/889,484

Applicant(s)

MAEDA ET AL.

Examiner

Pamela A Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on or before 1/8/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an Japanese application number 1999/9338 filed in January 18, 1999 and Japanese application number 1999/122696 filed in April 28, 1999. It is noted, however, that applicant has not filed a certified copy of the either of these applications as required by 35 U.S.C. 119(b).

Specification

The disclosure is objected to because of the following informalities:

- a) pages 3-14, of the Applicant's specification, make reference to specific claim numbers. This is considered to be unacceptable because the claim numbers may change during the prosecution of the application. A suggested alternative is to incorporate the claim language, of the claim being referenced, instead of the claim number; and,
- b) the specification is replete with grammatical errors and nonsensical phrases, examples of the following are: on page 17, line 4, which recites "plurality of substrate"; on page 17, lines 17-18, which recites "above series of drying operation is carried out, almost fluid supplied"; on page 18, lines 4-5, which recites "surrounded by an inert gas blowing nozzle" and on page 19, lines 4-5, which states

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"nozzle 5 injects the drying fluid in a horizontal direction", however, the figures show the nozzle injecting fluid in a VERTICAL direction.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following claim language is considered to be vague and indefinite:

claim 1, lines 1-2, "[a] method for drying substrate is a method" is considered to be confusing and indefinite;

claim 1, lines 4-7, "dries a surface of each substrate (1) by relatively lowering a fluid face of cleaning fluid (2) within a processing chamber (3) with respect to the substrate",

claim 2, line 1, "[a] method for drying substrate",

claim 2, line 3, "blowing inert gas for atomizing the drying fluid",

claim 3, line 1, "[a] method for drying substrate",

claim 4, lines 1-2, "[a] device for drying substrate is a device"

claim 4, lines 3-6, "relatively lowering a fluid face of cleaning fluid (2) within a processing container (3) with respect to the substrates (1),

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claim 5, line 1, "[a] device for drying substrate",

claim 5, line 3, "blowing inert gas for atomizing the drying fluid",

claim 6, line 1, "[a] device for drying substrate",

claim 7, lines 1-2, "[a] method for drying substrate is a method",

claim 7, lines 4-7, "relatively lowering a fluid face of cleaning fluid (2) within a processing container (3) with respect to the substrate",

claim 8, lines 1-2, "[a] device for drying substrate is a device"

claim 8, lines 4-7, "relatively lowering a fluid face of cleaning fluid (2) within a processing container (3) with respect to the substrate",

claim 9, line 1, "[a] device for drying substrate",

claim 10, line 1, [a] device for drying substrate, and

claim 10, lines 8-9, "being independently provided from one another."

The following claim language requires revisions as indicated below:

claim 1, lines 5-6, present a second recitation of "a processing container" which is confusing because it appears to be presenting another processing container, in addition to the first processing container as presented in lines 2-3,

claim 1, lines 10 and 13, recite steps, which comprise the method, and should not begin a capital letter,

claim 4, lines 4-5, present a second recitation of "a processing container" which is confusing because it appears to be presenting another processing container, in addition to the first processing container as presented in lines 2-3,

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claim 4, line 9, recites the feature of a "Drying fluid supplying means" which should not begin with a capital letter,

claim 7, lines 10 and 13, recite steps, which comprise the method, and should not begin with a capital letter,

claim 8, lines 5-6, present a second recitation of "a processing container" which is confusing because it appears to be presenting another processing container, in addition to the first processing container as presented in lines 2-3, and

claim 8, line 10, recites the feature of a "Drying fluid supplying means" which should not begin with a capital letter,

The following claims recite limitations which are not provided with a sufficient antecedent basis:

claim 1, lines 8-9, "the drying fluid",

claim 7, lines 7-8, "the drying fluid",

claim 9, line 7, "the halfway", and

claim 9, lines 7-8, "the first feed pipe."

Please note: claims 1-6 are further rejected, in view of the rejections under 35 U.S.C. 112, second paragraph, as best understood by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by 5,913,981 awarded to Florez. The invention of Florez presents a method and device for drying substrates which comprises a drying fluid supply means **136** for introducing a drying fluid into a processing chamber **111** wherein the drying fluid is injected, via injection nozzles **142**, onto the wafer surfaces (col. 11, lines 12-39). The drying fluid supplying means further comprises a first feed pipe for supplying the injected gas to a nozzle and a second feed pipe for supplying liquid drying fluid to a nozzle (col. 11, lines 40-49).

Allowable Subject Matter

Claims 9 and 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 7 and 8 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: the method and device which allows for the drying fluid and the carrier gas to be simultaneously blown from the same exhaust opening of the nozzle.

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Pertinent Prior Art

The following prior art, which presents method and devices for processing semiconductor wafers, is made of record and has not been relied upon; however, it is considered pertinent to applicant's disclosure: U.S. Patent No. 6,589,386 awarded to Maeda et al., U.S. Patent No. 6,328,814 awarded to Fishkin et al., and U.S. Patent No. 5,653,045 awarded to Ferrell.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela A Wilson whose telephone number is 703/308-2620. The examiner can normally be reached on Tues-Wed (6:30 a-3:00 p) and alternating Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 703/308-1935. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703/308-0861.



Pamela A Wilson
Primary Examiner
Art Unit 3749

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